



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,708	07/13/2000	Kazuyoshi Mizutani	Q60118	5086

7590

02/26/2003

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

HAMILTON, CYNTHIA

ART UNIT

PAPER NUMBER

1752

DATE MAILED: 02/26/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/615,708

Applicant(s)

MIZUTANI ET AL.

Examiner

Cynthia Hamilton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12, 14-19, 21 and 24 is/are pending in the application.
- 4a) Of the above claim(s) 24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 21 is/are allowed.
- 6) ☒ Claim(s) 12, 15-19 is/are rejected.
- 7) ☒ Claim(s) 15 and 19 is/are objected to.
- 8) ☒ Claim(s) 12, 14-19, 21 and 24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/997383.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12, 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al (5,403,908). The 1- and 2- (vinyl phenyl) naphthalene polymers of Watanabe et al disclosed in col. 6, lines 44-55 anticipate the compositions of claims 12, 16-17 (formula XIII) wherein only a polymer is required present as in instant Species (C). These polymers are particular examples of polymers used in melt molding or for materials such as electric appliances

Art Unit: 1752

and automobiles and films that need to be melt-moldable in a wide temperature range and have excellent heat resistance. W' is a single bond, m and n are equal to zero, so Z_1 and Z_2 is anything or nothing because they are not there, and A_1 is a benzene ring. In Watanabe et al, see also the Abstract and FIELD OF TECHNOLOGY.

5. Claims 12, 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Machida et al (5,403,908). The 1- and 2- (vinyl phenyl) naphthalene copolymers of Machida et al disclosed in col. 6, lines 10-14, and col. 5, lines 55-64, anticipate the compositions of claims 12, 16-17 (formula XIII) wherein only a polymer is required present as in instant Species (C). These polymers are particular examples of polymers used in melt molding or for materials such as electric appliances and automobiles and films that need to be melt-moldable in a wide temperature range and have excellent heat resistance. W' is a single bond, m and n are equal to zero, so Z_1 and Z_2 is anything or nothing because they are not there, and A_1 is a benzene ring. In Machida et al, see also the Abstract and THE MOST PREFERRED EMBODIMENT TO CARRY OUT THE INVENTION.

6. Claims 12, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida et al (5,475,061). The 1- and 2- (vinyl phenyl) naphthalene copolymers of Machida et al disclosed in col. 6, lines 10-14, and col. 5, lines 55-64, anticipate the compositions of claims 12, 16-17 (formula XIII) wherein only a polymer is required present as in instant Species (C). These polymers are particular examples of polymers used in melt molding or for materials such as electric appliances and automobiles and films that need to be melt-moldable in a wide temperature range and have excellent heat resistance W' is a single bond, m and n are equal to zero, so Z_1 and Z_2 is anything or nothing because they are not there, and A_1 is a benzene ring. In

Art Unit: 1752

Machida et al, see also the Abstract and THE MOST PREFERRED EMBODIMENT TO CARRY OUT THE INVENTION. What is not anticipated by Machida et al, are the copolymers of claims 12, 16-18 wherein the co monomers of claim 18 are present. However, in col. 7, lines 48, of Machida et al several examples of repeating unit (II) do read on the co monomers of the instant compositions of claim 18. They are beta-ethoxyethyl acrylate, phe(n)oxylethyl acrylate, phen(n)oxy diethyl ethyl acrylate and 2-benzoxylethyl acrylate wherein the instant structure - CH₂OR₇ wherein R₇ represents a hydrocarbon group having from 1 to 20 carbons atoms and being ethyl phenyl or benzo in the example of Machida et al. Machida et al teach the copolymers of (I) and (II) as set forth in the Abstract to form styrenic copolymers having a high degree of syndiotactic configuration as well as adhesivity and compatibility with other resins. Since the vinylphenyl naphthalenes are given as examples of (I) and beta-ethoxyethyl acrylate, phe(n)oxylethyl acrylate, phen(n)oxy diethyl ethyl acrylate and 2-benzoxylethyl acrylate are each given as examples of (II) by Machida et al, then their combination into copolymers would have been prima facie for the purposes set forth by Machida et al, i.e. the formation of styrenic copolymers having a high degree of syndiotactic configuration as well as adhesivity and compatibility with other resins as would have been all such combinations of the disclosed monomers in the lists of (I) and (II). The motivation to combine is to form a compatible styrenic copolymer as directed by Machida et al. The species formed would read on the generic copolymer composition set forth in instant claims 12, 16-18.

7. Claims 12, 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuki et al (4,473,690) in view of Morrison et al (Organic Chemistry). The organic polymers of Yuki et al as set forth in the claims and in col. 1, wherein R¹, R² and/or R³ are selected from the structure

Art Unit: 1752

between lines 40-45 with Ym present wherein Y is an aromatic group and m is 1 are like those of formula XIV (formerly VXIV but changed by amendment in response to the last Office Action) in instant claim 12 with the exception Y of Yuki et al is not as narrowly drawn as A₂ of applicant's claims. Y is aromatic, while A₂ is aromatic having 5 to 14 carbons with A₂ being benzene, naphthalene, anthracene or phenanthrene as aromatic carbon ring choices in instant claim 17. The most well known aromatic ring is benzene and is used by Morrison et al to define aromatic on page 318, third paragraph, "Aromatic compounds are benzene and compounds that resemble benzene in the chemical behavior. Thus, to use a benzene ring as the Y in Yuki et al would have been prima facie obvious when aromatic had been disclosed without further definition because benzene is the most common aromatic structure. The number of structures which make up R¹, R² and/or R³ are seen as so small that the use of any of the ones given in column 1 would have been anticipatory or in the least obviously taught by Yuki et al. With respect to instant claims 12 and 16-17, the polymers of Yuki wherein benzene or aromatic groups of less than 14 carbon atoms are used as Ym are held obvious for the reasons above and because the smaller aromatic ringed compounds would be necessary to give room for them in such close proximity to naphthalene and the other aromatic groups present in the polymer of Yuki et al.

8. Applicant's arguments filed January 29 2003 with respect to claims 12 and 16-18 and rejections in view of Watanabe et al, Machida et al ('061 or '908) or Yuki et al in view of Morrison et al have been fully considered but they are not persuasive. The examiner notes for the record the only amendment made to claim 12 since the last Office Action as shown in the Mark up copy of the amendment filed January 29, 2003 was changing (VXIV) to (XIV). The only change in claim 18 in the same period was R² to R₂. The only substantive argument presented by

Art Unit: 1752

applicants that address claims 12 and 16-18 is Watanabe et al, Machida et al and Yuki et al have different uses than the use of the present invention. The examiner made clear in all of these rejections that the single polymer of the prior art was being addressed. Applicants polymers in question are required to be "a bottom anti-reflective coating material composition". Each "composition" in claims 18 and 16-18 is so broad as to read on a single polymer. There is nothing in the specification that would require any other component present for the instant bottom anti-reflective coating material composition" to function. Applicants have not argued that other components must be present in the compositions of claim 12. Applicants have not argued the polymers of Watanabe et al, Machida et al and/or Yuki et al are somehow unable to function as "a bottom anti-reflective coating material composition". The materials of the prior art meet the limits of the only component of the composition required present. The intended use of the composition to form a bottom anti-reflective coating is an intended use. With respect to the polymers of Watanabe et al and Machida et al, the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). The new use of these polymers as a bottom anti-reflective coating material composition does not make them patentable. The polymers of Yuki et al are obvious to form for the uses of Yuki et al. All of these polymers when made and before addition to any other material are inherently useful to form a bottom anti-reflective coating material. The same use as applicants put forth is not required to make the instant invention obvious or anticipated. Applicants have put forth no reason why the polymers of Yuki et al, Watanabe et al or Machida et al are not functional as bottom anti-reflective coating material compositions. Applicants have not argued that the

Art Unit: 1752

polymers do not meet the requirements set forth for such composition in the instant specification. Applicants argue about the "effect of the present invention as an antireflective coat layer" not being taught. The formation of a coat layer is the intended use of the instant composition. The claim preamble must be read in the context of the entire claim. The determination of whether preamble recitations are structural limitations or mere statements of purpose or use "can be resolved only on review of the entirety of the [record] to gain an understanding of what the inventors actually invented and intended to encompass by the claim." *Corning Glass Works*, 868 F.2d at 1257, 9 USPQ2d at 1966. If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999). See also *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997) ("where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation"); *Kropa v. Robie*, 187 F.2d at 152, 88 USPQ2d at 480-81 (preamble is not a limitation where claim is directed to a product and the preamble merely recites a property inherent in an old product defined by the remainder of the claim); *STX LLC v. Brine*, 211 F.3d 588, 591, 54 USPQ2d 1347, 1350 (Fed. Cir. 2000) (holding that the preamble phrase "which provides improved playing and handling characteristics" in a claim drawn to a head for a lacrosse stick was not a claim limitation). The examiner has reviewed the entire record with respect to "antireflective coating material composition" as found in the instant claims in question.

Art Unit: 1752

Page three of the specification refers to preferable properties but not essential properties in lines 10-19. Page 59 of applicants' specification, first full paragraph, defines the antireflective coating material composition as containing 100% of the instant polymer. The nature of the polymer itself allows its use as an antireflective coating material composition. There are found in the specification no other limitations that act as a claim limitation beyond the actual polymer. Thus, the examiner holds the intended use of the polymers of the prior art rejections do not limit the claim beyond the polymer of which it is comprised. There is no requirement for a thermal crosslinker in these claims either. The rejections stand.

9. Claim 24 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. The linking claim is claim 12.

10. This application contains claim 24 drawn to an invention nonelected with traverse in Paper No. 7 and 10. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claim 15 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner notes that Y' is defined twice in claim 14. This variable is one group of alternatives for Formulae (XXV) and (XXVI) and this variable is another group of alternatives for Formulae (XXIV). The language is clear and therefore allowable. However, for claim 15, Y' is not so separated into two groups. Thus, what is meant by Y' being a host of groups some that

Art Unit: 1752

are outside the scope of Y' for Formulae (XXIV) in claim 15, for example, a single bond, is unclear. The examiner has given claim 15 the widest possible interpretation in view of this confusion over Y'. Thus, claim 15 is confusing.

13. Claim 15 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Giving Y' in claim 15 the broadest meaning reasonably possible for examination purposes, when Y' as given in claim 15 is outside the bounds of Y' of Formulae (XXIV) in claim 14, claim 15 fails to further limit the subject matter of a previous claim and is thus objected to. Examples of Y' of Formulae (XXIV) in claim 15 being outside bounds of the material of claim 14 are single bond, an alkylene, arylene or aralkylene group unsubstituted.

14. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani et al (6,090,531). With respect to instant claims 14-15, the compositions of Mizutani et al teach all of the species of Formula XXIV with the exception of using a species of the instant polymer in a working example with the thermal crosslinking compounds listed. The instant compositions wherein the polymers chosen as set forth in col. 3, lines 14-55 for A is A-9 ($Z_2 = OH$, $n = 0$ and $m = 1$ and Y' is a divalent organic group), or A-22 ($Z_2 = -OCH_3$, $n = 0$ and $m = 1$ and Y' is a divalent organic group) or for B is B-9 ($Z_2 = OH$, $n = 0$ and $m = 1$ and Y' is a divalent organic group), and as set forth in col. 3, lines 59-col. 4, lines 24, B16 ($Z_2 = OH$, $n = 0$ and $m = 1$ and Y' is a divalent organic group) read on the polymers of claim 15 wherein Y' is a divalent organic group, i.e. reading claim 15 as broadly as reasonably possible to avoid any question about what is being claimed by the indefinite claim language as set forth above.. The broader generic group

Art Unit: 1752

of XXIV is set forth in claim 2 wherein instant Y' from instant claim 15 is given and instant claim Y' is also encompassed by X of Mizutani et al and P can be naphthylene with ring groups of that read on the instant Z₂ groups) and the thermal crosslinking agents are melamine, guanamine or urea compounds substituted by at least one group selected from the group consisting of a methylol group and an alkoxymethyl group at two or more positions. Thus, with respect to instant claims 14-15, the compositions of claim 2 of Mizutani et al make obvious the instant compositions wherein Formula XXIV and a thermal crosslinker are used because Mizutani et al disclose specific species of polymers which fit into applicants species and into the polymers described by Mizutani et al as part of their compositions for anti-reflective coating material.

15. The examiner notes applicants did not amend claim 19 to include the limitation to keep the scope of the polymers within that set forth in claim 18. They have chosen to broaden what the examiner found allowable in the last Office Action as set forth in Paragraph 25. Thus, claim 19 is made broader in scope by amendment than it was in the last Office Action.

16. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 2 of claim 19, is found component (b) but component (b) is never defined in claim 19. Thus, claim 19 is vague because what is meant by the variable (b) is unknown.

17. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1752

18. In response to applicant's question about Paragraph 2 of the last Office Action, the examiner did not lift the election of species and Paragraph 2 never stated the election of species was withdrawn. Paragraph 2 was given to warn applicants about the possible future repercussions in canceling claims to Species B without concurrently removing Species B from the generic claims 12 and 16-18 still present. The statement that an election of species is withdrawn is not of record in the last Office Action.

19. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. On pages 11-12 of the instant specification written description is given for only those polymers in claim 19 that have an organic group having a $-\text{CH}_2\text{OH}$, CH_2OR_4 or $-\text{CH}_2\text{OCOCH}_3$ terminal group wherein R^4 represents a hydrocarbon group having from 1-20 carbon atoms. (10) is described within the limits of (9) on page 11 for A. Other groups of compounds such as those modified by reaction of formalin with other components in a manner that would eat up the above groups such that none remained are not supported by the specification.

20. The examiner notes that claims 14-15 have been newly amended to present a new generic group, i.e. polymer and a thermal cross linking agent. This is a sub species now exclusive of Species C set forth in the Election requirement of March 2001. Only claims 12, 16-18 and 19 (with respect to claim 19, component (b) is not specified, so the examiner must assume the broadest limits possible, such as b is nothing) remain generic to Species A, B and C. Allowed claim 21 is limited to the elected Species A. The examiner notes that allowed claim 21 is not

limited to a thermal crosslinking agent. Only claim 19 has been examined to the full extent of Species A, B and C set forth.

21. Claim 19 is objected to because of the following informalities: In the penultimate line, --

-C₆H₄(OH)CH₂OH should be -C₆H₃(OH)CH₂OH and -C₆H₄(OH)CH₂OCH₃ should be

-C₆H₃(OH)CH₂OCH₃. There are three groups on the aromatic group not two. Appropriate correction is required.

22. Claims 14 and 21 are allowed.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

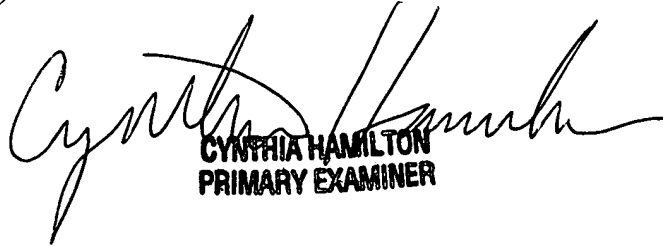
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cynthia Hamilton whose telephone number is (703) 308-3626. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.

Art Unit: 1752

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on (703) 308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of papers not received regarding this communication or earlier communications, or of a general nature or relating to the status of this application or proceeding should be directed should be directed to the Customer Service Center of Technology Center 1700 whose telephone number is (703) 306-5665.

Cynthia Hamilton
February 22, 2003



**CYNTHIA HAMILTON
PRIMARY EXAMINER**